

REMARKS

In the Office Action, the Examiner rejected claims 1-17 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,883,426 to Tokuno et al. ("Tokuno"). No claims are amended herein. Claims 1-17 remain pending.

Regarding the Examiner's rejection of claims 1-17 under 35 U.S.C. § 102(b), Applicant respectfully disagrees with the Examiner's assertions and conclusions as set forth in the Office Action¹. Accordingly, Applicant respectfully traverses this rejection.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference ... [t]he identical invention must be shown in as complete detail as is contained in the . . . claim."

M.P.E.P. § 2131 8th Ed. (Rev. 2), May 2004 (internal citations omitted).

Tokuno cannot anticipate independent claims 1 and 6, because Tokuno fails to teach each and every elements recited in independent claims 1 and 6. Specifically, Tokuno fails to teach at least "a plurality of chip interconnections ... formed into substantially the same pattern," "a plurality of intermediate interconnections ... formed into a pattern different from the pattern of the chip interconnections," and "a plurality of through holes extending through the chip mounting bases and the interconnection base at once along a stacking direction," as recited in claims 1 and 6.

Tokuno, as shown in Figures 1 and 2, teaches:

connection bumps 6 of mounting substrates 2a through 2d, onto which are mounted semiconductor chips 1 are used to stack the substrates to four levels, wave-shaped heat-radiating elements 5a through 5c, made of copper, being in

¹ The Office Action contains a number of statements reflecting characterizations of the related art and the claims. Regardless of whether any such statement is identified herein, Applicant declines to automatically subscribe to any statement of characterization in the Office Action.

thermal contact between the semiconductor chips 1 of the mounting substrates 2b through 2d and the rear surfaces of the mounting substrates 2a through 2c, making use of the spring elasticity of the radiating elements to establish ... thermal contact.

Tokuno, col. 2, lines 36-45. At page 3 of the Office Action, the Examiner apparently characterizes the connection bumps 6, as constituting Applicant's claimed "chip interconnections." Even if the Examiner's characterization could be considered correct, Tokuno is silent as to whether the connection bumps of Tokuno are "formed into substantially the same pattern," as recited in claims 1 and 6. Similarly, Tokuno is silent as to whether the connection bumps are "formed into a pattern different from the pattern of the chip interconnections," as recited in claims 1 and 6.

Moreover, Tokuno also fails to teach "through holes," as recited in claims 1 and 6. Tokuno teaches that "connection bumps 6 ... onto which are mounted semiconductor chips," and "soldering materials can be used for the connection bumps 6 and further a conductive metal, for example, copper balls, can be used accompanied by the soldering material as a core component." Tokuno, col. 2, lines 36-38 and 48-51. Tokuno thus teaches that each mounting substrate 2 is connected through the connection bumps 6, which are separately mounted on each of the mounting substrates, and is silent as to "through holes" extending through the mounting substrates 2. Tokuno thus cannot teach "a plurality of through holes extending through the chip mounting bases and the interconnection base at once along a stacking direction," as recited in claims 1 and 6.

Because Tokuno fails to teach each and every element recited in claims 1 and 6, those claims are allowable over Tokuno, and claims 2-5 and 7-11 are allowable at least due to their respective dependence on claims 1 and 6. Moreover, claim 12, although of

different scope, recites language similar to that of claims 1 and 6, and is allowable over Tokuno at least for the same reasons as with respect to claims 1 and 6. Similarly, claims 13-17 are allowable at least due to their dependence on claim 12.

For at least the foregoing reasons, Applicant respectfully submits that Tokuno cannot anticipate claims 1-17. Accordingly, Applicant respectfully requests that the Examiner withdraw the rejection of claims 1-17 under 35 U.S.C. § 102(b).

In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916. . .

Respectfully submitted,

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